

THE T-TEST

TI-83 INSTRUCTIONS

VISIT

The average house price in a suburb was known to be \$235 000. A sample was taken in 2005 to see whether or not the average price had changed.

200 houses were sampled and the mean was found to be \$215 000 with an unbiased estimate of the standard deviation of \$30 000.

The following steps can be used to determine if the average house price has changed:

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```
IT CALC TESTS
2-Test...
T-Test...
2-SampZTest...
2-SampTTest...
1-PropZTest...
2-PropZTest...
ZInterval...
```

```
Test
npt:Data STATE
μ:235000
x:215000
Sx:30000
n:200
μ:μ0 <μ0 >μ0
Calculate Draw
```

Step 3: Highlight **Calculate** and press **ENTER**.

You can also draw the distribution by highlighting **Draw** and pressing **ENTER**.

```
T-Test
μ≠235000
t=-9.428090416
p=1.110322E-17
x=215000
Sx=30000
n=200
```

The p -value is less than 0.05, so we reject H_0 . There is sufficient evidence (at the 0.05 level) that the mean is smaller in 2005 than it was in 2004.

Note: The p -value is different from that obtained from the Casio calculator.

